UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,022	01/07/2002	Asok K. Perumainar	P7213	2620

32658 7590 05/04/2007

HOGAN & HARTSON LLP
ONE TABOR CENTER, SUITE 1500
1200 SEVENTEEN ST.
DENVER, CO 80202

EXAMINER	
GISHNOCK, NIKOLAI A	
ART UNIT	PAPER NUMBER
3714	
MAIL DATE	DELIVERY MODE
05/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/041,022	PERUMAINAR, ASOK K.	
	Examiner	Art Unit	
	Nikolai A. Gishnock	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-11,13-17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-11,13-17,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

In response to the Applicant's amendments, filed 6/9/2006, claims 6, 12, & 18 are cancelled. Claims 1-5, 7-11, 13-17, 19, and 20 are pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is unclear where the limitation, "wherein the semantic view includes effects of execution including object configurations" is located in the specification. "Object configurations" are interpreted herein as, "object's attributes and methods". This is a new matter rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7-11, & 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hennefeld, Julien O. *Using Turbo Pascal 4.0-6.0 – 2nd ed.* Boston, MA, PWS-Kent Publishing Co., 1992, 1989. p. 31-32, 42-43, 89-91, 455-460. ISBN 0-534-92710-6, hereinafter known as Hennefeld. Hennefeld discloses a method in a computer system for teaching a programming language, comprising: first computer code providing an interpreter interface including a code entry portion adapted for receiving an input from a user (typing in a program, p. 31); receiving a single code entry comprising a programming statement in the programming language from the user via the code entry portion (built-in debugger runs program one statement at a time, p. 91 & 456); second computer code configured for processing the code entry (program is compiled, p. 31) where processing includes comparing the code entry to a set of syntax and language rules for the programming language (syntax rules, p. 31-32); and executing the code entry when no errors are identified (CTRL/F9 will attempt compilation, and if successful, also run the program, p. 32) [Claims 1 & 14]; and third computer code for displaying a visual cue to the user in response to the processing (output on screen, p. 89; also debugger used to figure out why a program produces incorrect output, p. 89-91) [Claims 1 & 11]. Hennefeld discloses where the processing includes comparing syntax of the code entry to a set of syntax rules for the programming language to identify a syntax error or validity of the code entry syntax (syntax errors, violations of the grammatical rules are detected, p. 31-32 & 42-43) [Claim 2]. Hennefeld discloses fourth computer code for comparing, including identifying the syntax error, including retrieving an error code based on the syntax error and the visual cue includes the error code (syntax error displayed as "Error 3: Unknown Identifier", p. 32) [Claims 3 & 11]. Hennefeld discloses where the visual cue further includes the received code entry (syntax error displayed as "Error 3: Unknown Identifier", p. 32; with the cursor blinking at the "i" of "interger" (sic), p. 32) [Claim 4]. Hennefeld discloses where the interpreter interface includes a code entry history

portion for displaying the error code, the received code entry, and the previously received and processed code entries (test of program "drill" typed in {edit mode}, p. 31-32; pressing F6 toggles back to the edit mode, p. 455) [Claims 5 & 13]. Hennefeld discloses where the visual cue includes displaying a semantic view of effects of executing the code entry (if compilation is successful, program is run, p. 32) [Claims 7 & 15]. Hennefeld discloses where the semantic view includes displaying a type, name, and value of a variable declared and assigned in the code entry (Built-In debugger allows you to set up a watch window to watch the values of certain variables change as you execute the program one line at a time, p. 455; Data Structures as Watch Variables; a watch variable can be any type of variable; the display of the variable will vary according to the variable's data structure, p. 456) [Claim 8]. Hennefeld discloses where the displaying objects and arrays created by or manipulated by execution of the code entry (contents of arrays and records are displayed; type is indicated by the parenthesis and commas, p. 456) [Claims 9 & 10].

5. Claims 1-5, 7, 11, & 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Inman, D. et al. *Qbasic® Made Easy*. Berkeley, CA, McGraw-Hill Inc. 1991. p. 14-18, 153, 176-187, 400, ISBN 0-07-881698-X, hereinafter known as Inman. Inman discloses a method in a computer system for teaching a programming language, comprising: first computer code providing an interpreter interface including a code entry portion adapted for receiving an input from a user (Immediate Window, p. 14-18); receiving a single code entry comprising a programming statement in the programming language from the user via the code entry portion (when a statement is typed in the Immediate Window, the computer obeys the statement immediately, p. 14); second computer code configured for processing the code entry where processing includes comparing the code entry to a set of syntax and language rules for the

programming language (typing mistake or invalid statement causes a syntax error, p. 14); and executing the code entry when no errors are identified (Type: BEEP and press ENTER, the computer beeps; corrected statement also beeps, p. 14-15) [Claims 1 & 14]; and third computer code for displaying a visual cue to the user in response to the processing (output is shown on the Output screen when a statement that produces visible output is executed, p. 16) [Claims 1 & 11]. Inman discloses where the processing includes comparing syntax of the code entry to a set of syntax rules for the programming language to identify a syntax error or validity of the code entry syntax (syntax error due to incorrect statement, p. 14-15) [Claim 2]. Inman discloses fourth computer code for comparing, including identifying the syntax error, and including retrieving an error code based on the syntax error and the visual cue including the error code (syntax error dialog box, p. 15) [Claims 3 & 11]. Inman discloses where the visual cue further includes the received code entry (in the Immediate Window, p. 15) [Claim 4]. Inman discloses where the interpreter interface includes a code entry history portion for displaying the error code, the received code entry, and the previously received and processed code entries (Immediate Window shows the last line executed and the current input line, p. 17; also, use View Window to enter programs, p. 16) [Claims 5 & 13]. Inman discloses where the visual cue includes displaying a semantic view of effects of executing the code entry (Output screen shows execution of statements, p. 16) [Claim 7 & 15].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 8-10, 16, 17, 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inman, in view of Wygodny et al. (US 6,282,701 B1), hereinafter known as Wygodny. Inman teaches all the features as demonstrated above in the rejections of claims 1, 7, & 11. Inman also discloses dynamic debugging and tracing, which displays how the values of variables change during program execution (p. 176). What Inman fails to teach is where a semantic view (view window) includes displaying a type, name, and value of a variable declared and assigned in the code entry, objects, and arrays [Claims 8-10]. However, Wygodny teaches a Trace Detail which displays the type, name, and value of a variable (int m_MaxBurn = 83), an object (class CPalette m_Palette), and an array (array tagRGBQUAD m_rgbPalette, all in Figure 11 and Col. 20:1 to 21:67). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the format of the Trace Detail window on Wygodny for the dynamic debugger in the computer implemented method of Inman, in order to pinpoint an element in the client code that causes a bug (18:7-9) [Claims 8-10]. Inman also teaches where the semantic view includes an error statement selected based on the syntax

error (typing mistake or invalid statement causes a syntax error, p. 14) [Claim 17], an execution engine operating to execute the code entry when the syntax is determined valid (Type: BEEP and press ENTER, the computer beeps; corrected statement also beeps, p. 14-15), based on a previously entered code entry (Immediate Window shows the last line executed and the current input line, p. 17) [Claim 19], and receiving means including an interpreter interface with a code entry window for accepting a received code entry, and displaying a code entry history portion for displaying the error code, the, and the previously received and processed code entries (use View Window to enter programs, p. 16) [Claim 20]. What Inman further fails to teach is where the semantic view includes effects of execution including object configurations [Claim 16]. However, Wygodny teaches a Trace Detail which displays an object configuration (class CPalette m_Palette, comprising base class CGdiObject, further comprising base class CObject, and method m_hObject with attribute 0x37080241, all in Figure 11 and Col. 20:1 to 21:67). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the format of the Trace Detail window on Wygodny for the dynamic debugger in the computer implemented method of Inman, in order to pinpoint an element in the client code that causes a bug (18:7-9) [Claims 16, 17, 19, & 20].

Response to Arguments

9. Applicant's arguments with respect to claims 1-5, 7-11, 13-17, 19, & 20, filed 6/9/2006, see p. 6-10, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolai A. Gishnock whose telephone number is 571-272-1420. The examiner can normally be reached on M-F 8:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on 571-272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NAG

NAG
4/17/2007

KATHLEEN MOSSER
PRIMARY EXAMINER